



CUSTOM PACKAGED AIR HANDLING UNIT SCHEDULE (FULL BREAK DOWN FOR SITE ASSEMBLY)

MECHANICAL (237313, 237316, 237333, 237339)												
EQUIPMENT TAG	APPLICATION	FACE & BYPASS DAMPERS (YES/NO)	BLENDER & MIXER (code 8)	MINIMUM OUTDOOR AIR CFM	COOLING	HEATING COIL	AIR PRE-FILTER	AIR FINAL-FILTER	HUMIDIFIER	SUPPLY FAN	RETURN FAN	MANUFACTURER BID OPTION #1
AH1HW-11	EMERGENCY	YES	N/A	5,250	AHUC 11	EXISTING	AHUF 11	AHUF 11	AHUF 11	AHUS 11	EXISTING	FANWALL
AH2MW-19	OR SUITE	YES	YES	10,000/18,000	AHUC 19	AHUC 19	AHUF 19	AHUF 19	AHUF 19	AHUS 19	AHUR 19	VENTROL/FANWALL
AH2MW-20	OR SUITE	YES	YES	8,000/18,000	AHUC 20	AHUC 20	AHUF 20	AHUF 20	AHUF 20	AHUS 20	AHUR 20	VENTROL/FANWALL
AH2MW-27	GI	YES	N/A	10,500	AHUC 27	EXISTING	AHUF 27	AHUF 27	AHUF 27	AHUS 27	EXISTING	FANWALL
MECHANICAL NOTES: ANY SELECT FAN ARRAY SIZE OF THEIR PREFERENCE. HOWEVER, AT LEAST ONE(1) SUPPLY AND ONE(1) RETURN FAN SHOULD BE FULLY REDUNDANT TO BE SIZED FOR THE FULL UNIT CAPACITY. 1. PROVIDE EACH FAN WITH ITS OWN DEVICES VFD SPEED CONTROLS. ALL VFDs TO BE MOUNTED WITH VENTED ENCLOSURE WITH REMOTE I/O PANELS THAT DISPLAY DRIVE CONDITION EXTERNAL OF ENCLOSURE OF EACH VFD. 2. MANUFACTURER SHOULD PROVIDE ALTERNATE LINE ITEM PRICING FOR THE UNIT COST OF EACH ADDITIONAL FAN AND MOTOR TO BE PROVIDED FOR EMERGENCY REPLACEMENT (TO BE STORED ON SITE BY OWNER). 3. PROVIDE COMPACTOR MOTOR AND AGENT FAN-PANELS BE BUILT WITH APPROXIMATELY 30% OVERSIZED MOTOR. PROVIDE SILENCERS TO BE PROVIDED FOR EACH ADDITIONAL FAN AND MOTOR TO BE PROVIDED FOR EMERGENCY REPLACEMENT (TO BE STORED ON SITE BY OWNER). 4. PROVIDE ALL NEW SUPPLY AND RETURN FANS, WITH SPRING TYPE VIBRATION ISOLATORS AND PIZO RINGS, OR ALTERNATE METHOD OF AIRFLOW MEASUREMENT FOR ENTIRE SUPPLY/RETURN AIRFLOW RATE MONITORING. 5. PROVIDE BACKDRAFT OR AIRCUTTED DAMPERS FOR ALL SUPPLY AND RETURN FANS. PROVIDE NECESSARY CONTROLS TO ISOLATE OFF EACH INDIVIDUAL FAN WITHOUT AFFECTING UNIT PERFORMANCE. WHEN NECESSARY, 6. PROVIDE BACKDRAFT OR AIRCUTTED DAMPERS FOR ALL SUPPLY AND RETURN FANS. PROVIDE NECESSARY CONTROLS TO ISOLATE OFF EACH INDIVIDUAL FAN WITHOUT AFFECTING UNIT PERFORMANCE. WHEN NECESSARY, 7. UNIT SHALL HAVE 2" INSULATED WALLS WITH 18 GA GALVANIZED STEEL EXTERIOR PANELS AND 20 GA INTERIOR 304 STAINLESS STEEL WITH ANTI-MICROBIAL COATING IN ALL SECTIONS. FLOORS HEAVY GAUGE ALUMINUM CHECKER PLATE OR STAINLESS. 8. PROVIDE EACH FAN WITH ITS OWN DEVICES VFD SPEED CONTROLS. ALL VFDs TO BE MOUNTED WITH VENTED ENCLOSURE WITH REMOTE I/O PANELS THAT DISPLAY DRIVE CONDITION EXTERNAL OF ENCLOSURE OF EACH VFD. 9. SURETLY UNITS #19 AND #20 BOTH SHALL BE PROVIDED WITH AIRROL BLADE CONTROL DAMPERS FOR BYPASS AROUND BLENDER SECTION DURING BACKDRAFT MODE OF OPERATION. REFER TO MANUFACTURER DRAWINGS. 10. ALL DAMPERS TO BE PROVIDED BY THE UNIT MANUFACTURER WITH AIRROL BLADES. DAMPER ACTUATORS ARE TO BE PROVIDED BY THE CONTROLS CONTRACTOR. CONTROL DAMPERS INCLUDE A. INKAKE (12 per note 3), RELIEF AIR, MAKING BOX, RETURN AIR, AND ON UNITS #19 AND #20 ADDITIONAL CONTROL DAMPERS FOR BYPASS OPERATION CONTROL. (refer to note #3). O.A. INKAKE AND RELIEF DAMPERS SHALL HAVE INSULATED BODIES WITH INTEGRAL THERMAL BREAK. 1. SEE SUPPLY FAN SCHEDULE AND RETURN FAN SCHEDULE FOR ELECTRICAL INFORMATION.												
ELECTRICAL NOTES:												

VARIABLE FREQUENCY MOTOR CONTROLLER SCHEDULE

MECHANICAL/ELECTRICAL (230923)												
EQUIPMENT TAG	QUANTITY (# of VFDs)	EQUIPMENT SERVED	VOLTAGE	PHASE	CALCULATED ENCLOSURE TYPE (NEMA 31/4X/12)	ENCLOSURE TYPE	PLENUM CONSTANT TORQUE (YES/NO)	VARIABLE TORQUE/CONSTANT TORQUE (YES/NO)	INVERT AC DRIVE/AC	BYPASS (YES/NO)	VFD BYPASS CONTROL (YES/NO)	MOTOR STARTING IN (YES/NO)
VFC 01	4 or 3	AHUS 11	480 V	3	NEMA 4X	NO	CONSTANT TORQUE	NO	NO	NO	H-O-A	N/A
VFC 02	1	AHUR 11	480 V	3	NEMA 4X	NO	CONSTANT TORQUE	NO	NO	NO	H-O-A	N/A
VFC 03	12 or 4	AHUS 19	480 V	3	NEMA 4X	NO	CONSTANT TORQUE	NO	NO	NO	H-O-A	N/A
VFC 04	12 or 4	AHUR 19	480 V	3	NEMA 4X	NO	CONSTANT TORQUE	NO	NO	NO	H-O-A	N/A
VFC 05	12 or 4	AHUS 20	480 V	3	NEMA 4X	NO	CONSTANT TORQUE	NO	NO	NO	H-O-A	N/A
VFC 06	12 or 4	AHUR 20	480 V	3	NEMA 4X	NO	CONSTANT TORQUE	NO	NO	NO	H-O-A	N/A
VFC 07	6 or 3	AHUS 27	480 V	3	NEMA 4X	NO	CONSTANT TORQUE	NO	NO	NO	H-O-A	N/A
VFC 08	2	AHUR 27	480 V	3	NEMA 4X	NO	CONSTANT TORQUE	NO	NO	NO	H-O-A	N/A
GENERAL NOTES: A. VFDs SHALL BE MANUFACTURED BY ABB. OTHER VFD BRANDS WILL NOT BE CONSIDERED WITHOUT WRITTEN APPROVAL FROM VA CORP. B. VFDs SHALL BE SIZED FOR THE FULL UNIT CAPACITY. C. VFDs TO HAVE INTEGRAL DISCONNECT UNLESS NOTED OTHERWISE.												
NOTES:												

AIR HANDLING UNIT – PREFILTER SCHEDULE

MECHANICAL (2324100)												
EQUIPMENT TAG	SERIED	TYPE	CFM	NUMBER OF MODULES	SIZE PER MODULE (FT-X-FT)	EFFICIENCY (%)	MERV	AD CLEAN	AD AT SIZE	MANUFACTURER	NUMBER	MODEL
AHUF 11	AH1HW-11	4" FLEATED	21,000	X	24"X24"X4"	60%	11	0.35"	1.0"	CAMFL-FARR	OPW11	1.2,3
AHUF 19	AH2MW-19	4" FLEATED	36,000/60,000	X	24"X24"X4"	60%	11	0.35"	1.0"	CAMFL-FARR	OPW11	1.2,3,4
AHUF 20	AH2MW-20	4" FLEATED	36,000/60,000	X	24"X24"X4"	60%	11	0.35"	1.0"	CAMFL-FARR	OPW11	1.2,3,4
AHUF 27	AH2MW-27	4" FLEATED	42,000	X	24"X24"X4"	60%	11	0.35"	1.0"	CAMFL-FARR	OPW11	1.2,3
MECHANICAL NOTES: 1. PROVIDE PREFILTERS WITH ANGLED RACK TO REDUCE FACE VELOCITY BELOW 500 FPM DURING HIGHER AIRFLOW BACKDRAFT OPERATION AND MINIMIZE PRESSURE DROP. 2. INCLUDE MAGNETIC CAGE IN ADDITION TO DIGITAL PRESSURE SENSORS PROVIDED BY CONTROLS CONTRACTOR. TO MEASURE PRESSURE DROP ACROSS FILTERS. 3. PROVIDE OPEN TRANSITION MANUAL CHANGE OVER SWITCH FOR DUAL VFD SELECTION. 4. FILTER CONDITIONS SHOWN ARE FOR FULL BYPASS MODE OF OPERATION AT 80,000 CFM. LOWER FLOW NORMAL OPERATION WILL RESULT IN LOWER VELOCITY AND PD.												
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AIR HANDLING UNIT – FINAL FILTER SCHEDULE

MECHANICAL (2324133)												
EQUIPMENT TAG	SERIAL	TYPE	CFM	NUMBER OF SIZE PER MODULE	EFFICIENCY	MERV	AD CLEAN	AD AT SIZE	MANUFACTURER	NUMBER	MODEL	MECHANICAL
AHUF 11	AH1HW-11	HEPA	21,000	X	24"X24"X12"	90-95%	14	0.35"	1.25"	CAMFL-FARR	D14W-ES	1.2,3
AHUF 19	AH2MW-19	HEPA	36,000/60,000	X	24"X24"X12"	99-99%	18	1.25"	1.25"	CAMFL-FARR	D18W	1.2,3,4
AHUF 20	AH2MW-20	HEPA	24,000/60,000	X	24"X24"X12"	99-99%	18	1.25"	1.75"	CAMFL-FARR	D18W	1.2,3,4
AHUF 27	AH2MW-27	4" FLEATED	42,000	X	24"X24"X12"	90-95%	14	0.35"	1.25"	CAMFL-FARR	D14W-ES	1.2,3
MECHANICAL NOTES:												
1. INCLUDE TIGHT MOUNTING ROCK WITH CLAMPING MECHANISMS AT EACH CORNER, OR EDGE, FOR FULL PERIMETER SUPPORT. HEPA FILTER PAGES TO HAVE KNIFE EDGE SEAL.												
2. PROVIDE FINAL FILTERS WITH CARTRIDGE MOUNTING AT 90 DEGREE. PROVIDE FINAL FILTERS WITH CAR												